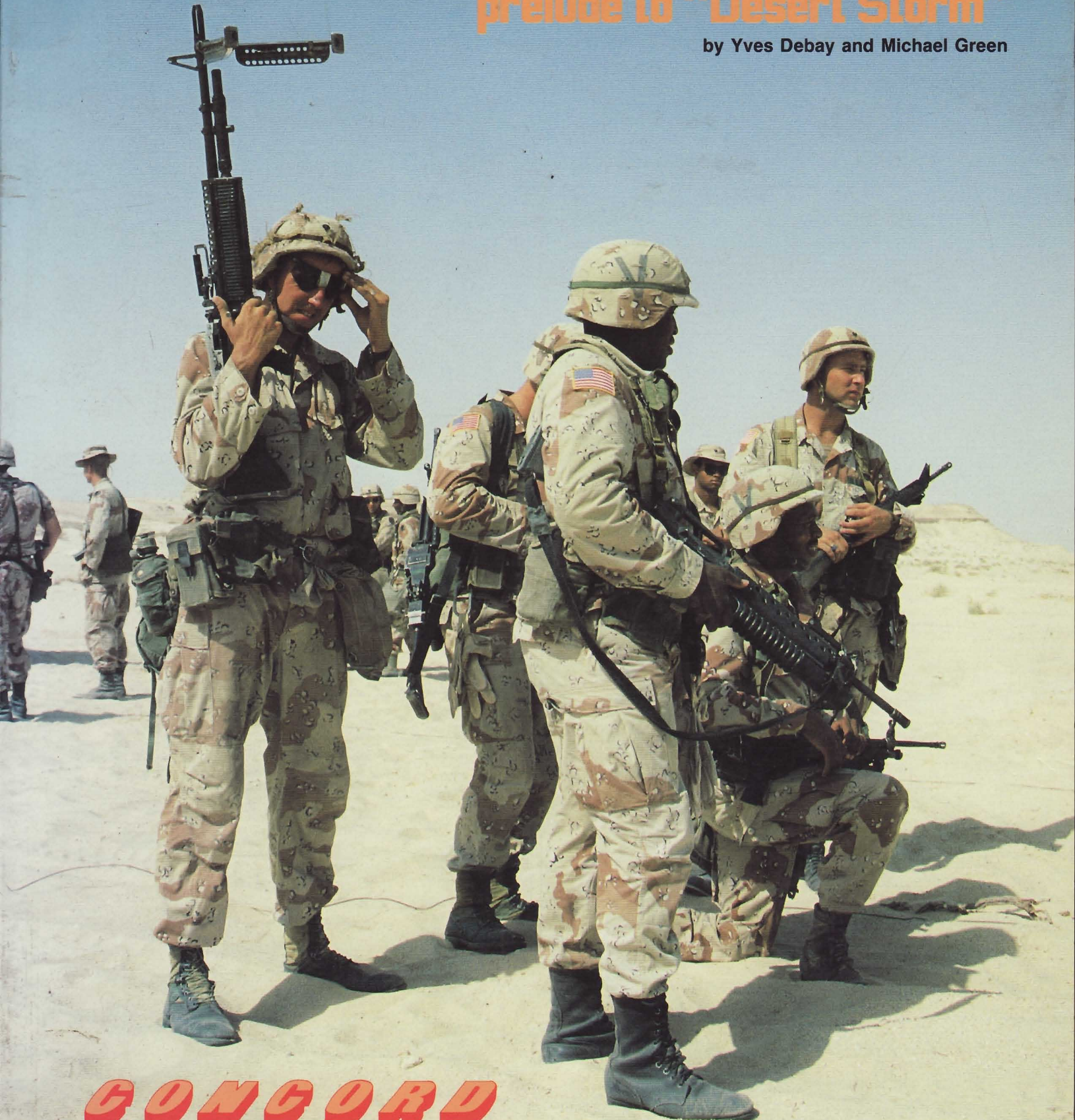


2003

# OPERATION DESERT SHIELD

prelude to "Desert Storm"

by Yves Debay and Michael Green



**CONCORD**  
PUBLICATIONS COMPANY



## U.S. Army deployment, prelude to "Operation Desert Storm"

**Photos by Yves Debay**  
**Text by Michael Green**





OPERATION DESERT SHIELD  
"Operation Desert Storm" of 1991  
Photos by Yves Debay  
Text by Michael Green

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#### Front Cover

Pictured are group of infantrymen of the 24th Division  
getting ready for another round of training.

#### Back Cover

To protect its support bases, the U.S. Army quickly  
deployed to Saudi Arabia its Patriot Tactical Air Defense Missile  
System.

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# Introduction

On August 2, 1990, over 100,000 Iraqi troops, attacking in three waves, overran the small oil-rich country of Kuwait.

Kuwait's military forces, outnumbered by 26 to 1, never stood a chance. While small pockets of fighting continued for three to four days, effective resistance to the Iraqi assault ended in the first few hours.

On August 5, the Iraqi military took over the area known as the "Free Zone," an oil field jointly managed by both Kuwait and Saudi Arabia.

While the reasons for Iraq's attack and takeover of Kuwait are beyond the scope of this book, the United States government decided that Saudi Arabia, which had long-term disputes with Iraq dating back to the early 1920s, was in a great deal of peril.

The Saudi Arabian military forces were far larger and more capable than those of Kuwait. Unfortunately, their military forces had suffered for decades from an acute manpower shortage which left much of their vast inventory of advanced U.S. and European-built weapons systems lying idle.

Soon after the invasion of Kuwait by Iraq, James Baker, the United States Secretary of State, visited Saudi Arabia at the request of President Bush to show King Fhad, ruler of Saudi Arabia, a number of U.S. military satellite photos showing dangerously large concentrations of Iraqi troops amassed on the border of Saudi Arabia.

Despite a number of misgivings about allowing large numbers of American troops on Saudi soil, King Fhad quickly realized the serious threat to his country's sovereignty and authorized the arrival of United States troops to help defend his country by any possible attack by Iraqi forces.

This authorization by King Fhad to allow United States military forces into his country on long-term basis has resulted in the largest, most massive military response by the United States military since World War II.

Named "Operation Desert Shield," the first United States Army units deployed to Saudi Arabia belonged to the U.S. Central Command which was formed in 1982 from elements of the Army, Navy, Air Force and Marine Corps to provide a force capable of rapid deployment to protect United States interests in the Middle East, Persian Gulf and Indian Ocean areas.

The principal ground units of the U.S. Central Command belong to the U.S. Army's XVIII Corps, based at Fort Bragg, North Carolina (nicknamed "the Dragon Corps" since 1951).

Today the XVIII Airborne Corps is the only airborne corps in the defense establishments of the United States and exercises control over the 10th Mountain Division (Light Infantry), the 24th Infantry Division (Mechanized), the 82nd Airborne Division, 101st Airborne Division (Air Assault), 194th Armor Brigade and 197th Infantry Brigade, plus a host of other support units.

Due to its quick reaction capabilities, the first troops sent to Saudi Arabia by the XVIII Airborne Corps belonged to the 82nd Airborne Division.

Brought in by a fleet of 70 C-5 Galaxy and C-141 Starlifters of the U.S. Air Force Military Airlift Command, plus a number of contracted 747s and Lockheed 1011 passenger planes, the first soldiers of the 82nd Airborne Division arrived in Saudi Arabia on August 8, 1990. They were from the 3rd Battalion of the 504th Airborne Infantry Regiment.

The Saudi airports of Dahrn Air Base and the newly-built civilian airport named after King Abdul Aziz near Daman in Saudi Arabia were the main arrival points for all American soldiers coming into Saudi Arabia by airlift.

Lightly equipped to travel fast, the soldiers of the 82nd Airborne Division were quickly sent to the front lines of Saudi Arabia near Kuwait. At that early date in time, the only soldiers that stood between the massive Iraqi army poised for a possible attack on Saudi Arabia were a few Saudi border guard troops and one mechanized brigade of the Royal Saudi Army.

While the 82nd Airborne Division troops had a large number of anti-tank missiles plus the support of a small number of M551 Sheridan tanks and Apache gunships, in the case of a serious Iraqi attack on Saudi Arabia, they would have not lasted long against the thousands of tanks arrayed against them.

Fortunately, the Iraqi military forces in Kuwait went from an

offensive role on to a defensive posture.

On the first few days of September, the first 105mm gun armed M1 tanks of the 24th Infantry Division (Mechanized) based at Fort Stewart, Georgia arrived. Also equipped with the M2 and M3 Bradleys, this was the first real U.S. Army armored might to pose any type of threat to the large number of Soviet-built tanks used by the Iraqi Army.

Nicknamed the "Victory Division", the 24th Infantry Division (Mechanized) sent to Saudi Arabia was reinforced by the 197th Infantry Brigade (Mechanized) based at Fort Benning, Georgia equipped with 105mm gun-armed M1 tanks and M113A2 armored personnel carriers.

Armored vehicles from the 24th and 197th were quickly loaded on Saudi military tank transporters and commercial haulers once they arrived in Saudi Arabia. They were soon sent out to replace the paratroopers of the 82nd Airborne Division.

With the arrival of these units, the 82nd Airborne Division was placed in reserve. In case of war breaking out, the elite soldiers of the 82nd would be dropped by parachute or carried by helicopters of the 101st Airborne Division (Air Assault), which had also arrived in Saudi Arabia by this time, to attack Iraqi military targets behind their lines.

While the M1 tanks of the 24th and 197th certainly added some badly needed firepower to the American Army forces already stationed in Saudi Arabia, their total tank strength only came to about 200 tanks against the Iraqi's 5,000 or more tanks. As a result, the U.S. Army decided to beef up their strength by sending two of their most potent armored units to Saudi Arabia in mid-October, 1990, since the XVIII Corps had already sent all of its major combat units and support units to Saudi Arabia (except the 10th Mountain Division) by late September, 1990.

The new armored units coming to Saudi Arabia in October belonged to the III Corps based at Fort Hood, Texas. These new armored units consisted of the famed 1st Cavalry Division and one brigade of the 2nd Armored Division, also based at Fort Hood, Texas. Also arriving with the M1 tanks of the combat units were a number of support units.

With the arrival of the 1st Cavalry Division plus the one brigade of the 2nd Armored Division attached to it, the United States government felt it had enough troops and equipment to stop any possible Iraqi military attack on Saudi Arabia.

From this point on, the U.S. Army began to build up its forces from that of only a defensive force to one that could conduct offensive action against Iraqi military forces in Kuwait.

On November 8, 1990 U.S. Secretary of Defense Dick Cheney announced that over half of the U.S. Army's military forces stationed in Germany would be deployed to Saudi Arabia. Additional units from the United States would also be sent.

During the next two months, the bulk of the U.S. Army's armored might was deployed to the desert sands of Saudi Arabia, prior to President Bush's January 15, 1991 deadline for Saddam Hussein to withdraw his armed forces from Kuwait.

On January 17, 1991 Operation Desert Shield became Operation Desert Storm around 1:50 a.m. Iraqi time. When the United States and its allies launched a massive air armada against Iraqi and occupied Kuwait. The air attacks which continued for days against the military forces of Iraq were designed to reduce American and allied casualties to the maximum extent possible and to achieve a military success in the shortest possible amount of time.

As this book goes to press, United States military ground forces have not yet been committed to battle. This could change anytime. Following volumes of this book will be published to cover such events.

This authors would like to offer special thanks to all the personnel of Army's public affairs who made this book possible and are too numerous to mention.

Special thanks are also due to Mr. Bill Rosenmund, Mr. Jim Edwards and Mr. Chuck Porter.





Soldiers from the 82nd Airborne Division, the first U.S. Army troops to deploy to Saudi Arabia as part of Operation Desert Shield, are undergoing a roll-call. In the background is the raised nose of the U.S. Air Force C-5A Galaxy transport plane that brought them to Saudi Arabia.



Carrying their unit's flag, members of the XVIII Airborne Corps prepare to move-out from the airfield they have just arrived at. The soldiers are all wearing their red paratrooper berets. Although the red beret is officially a dress uniform item, it is often worn by the troops in the field as a sign of pride.



Pictured are wide-angle photos of the tent city that quickly sprang up at Saudi Arabia's main airport to help process all the thousands of soldiers that were flooding into the country.







▲ It must have been strange for the paratroopers of the XVIII Airborne Corps to board yellow school buses to ride into combat with.

◀ Since the 82nd Airborne Division has very few organic trucks, when they arrived in Saudi Arabia, they were forced to take any available transport the Saudi government could provide. In this case, they were transported to their battlefield position in Saudi Arabia by commercial buses.



With their field-packs on the ground in front of them, soldiers of the XVIII Airborne Corps go through one of hundreds of roll calls that are so much a part of military life.







▲ One can see that the field packs carried by the men of the XVIII Airborne Corps are very large and heavy, since they are required to carry much of what they need in combat on their backs.

◀ Since the Saudi buses were not large enough to carry both the soldiers of the XVIII Airborne Corps and all their field gear, the Saudi government provided large trucks to carry their field gear to the front lines.

▼ Pictured are the paratroopers of the 82nd Airborne Division boarding a civilian bus.







▲ Soldiers of the 82nd Airborne Division were brought into Saudi Arabia by airlift around the clock (24 hours a day). Pictured are a platoon of paratroopers on the first day, near sunset, moving out from the airfield area.

► Saudi Arabia has a coastal plain bordering on the Persian Gulf which averages about 25 miles in depth. It is here that one can find a few scattered trees, such as this palm tree that a paratrooper on patrol is standing in front of. (U.S. Army photo)

▼ In Saudi Arabia, shade is almost as important as water to get away from the searing hot climate of the country. Pictured are paratroopers of the 82nd Airborne Division cleaning their weapons.







While there are many types of desert, classified according to their terrain feature characteristics, Saudi Arabia has a very large number of sandy desert areas which are characterized by flat areas with wind-made ripple marks of varying height (dunes).



Saudi Arabia the country, occupies most of the Arabian Peninsula. Being almost 865,000 square miles in area, Saudi Arabia is bordered on the north by Jordan, Iraqi, and Kuwait. Pictured is a paratrooper of the 82nd Airborne Division in a defensive position. (U.S. Army photo)



While Saudi Arabia possesses a small mountain range on its east coast which has an average elevation of about 4,000 feet, most of the country consists of different types of desert terrain. Pictured are paratroopers of the 82nd Airborne Division training in the desert.





▲ The desert has extreme daily temperature ranges in all seasons. In the summer, day temperatures can range between 120 and 130 degrees F.

At high temperatures during the day, a man who is resting may lose as much as a pint of water per hour by sweating; if he is working, his water loss (and requirement) will increase to more than 24 quarts of drinking water per man per day.

▲ ► Troops are in danger of heat exposure or heat stroke if they are required to perform rigorous training before they have gone through a period of acclimation, which is nature's way of adjusting the cooling system imposed by desert heat. This is true even though troops are in good physical condition. (U.S. Army photo)



► A paratrooper with an M-16 rifle and bayonet signals a squad member forward from his position in the Saudi desert. (U.S. Army photo)



Although most of a desert is barren, scrubby vegetation is present in some places. The lack of natural concealment may cause soldiers to have a feeling of exposure and insecurity for a few days.





▲ A paratrooper from the 82nd Airborne Division sets up a defensive flanking position with an M-249 SAW. (U.S. Army photo)

► The soldier who is physically fit becomes acclimated more rapidly and is capable of more work in the heat than a soldier who is in poor physical condition. Pictured is a paratrooper from the 82nd Airborne Division wearing some body armor which is, unfortunately, too hot to wear for a long period of time in the desert.

▼ Open terrain and lack of vegetation enhances the use of the antitank guided missile (ATGM) in the desert. Pictured is a TOW missile carrier configured HMMWV of the 82nd Airborne Division in the deserts of Saudi Arabia. (U.S. Army photo)





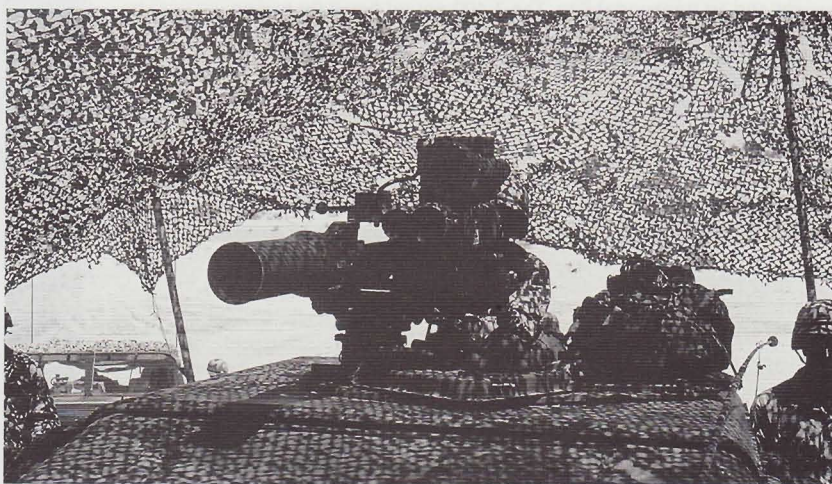


Because of the vulnerability, employment of wheeled vehicle-mounted ATGM is not as effective as the employment of ATGM from an armored vehicle. (U.S. Army photo)

► Unfortunately, the vulnerability of the crew of wheeled vehicle-mounted ATGM to enemy small-arms fire requires crew and weapons to move frequently. (U.S. Army photo)

▼ Desert terrain permits almost unlimited possibilities for use of ATGM like the TOW used by the 82nd Airborne Division against enemy tanks, personnel carriers, and other hard targets. (U.S. Army photo)

▼► A paratrooper of the 82nd Airborne Division poses with his TOW missile launcher. (U.S. Army photo)







The M-102 howitzer was specifically designed for light weight and air transportability. The 3,400 pound howitzer makes extensive use of aluminum and features a strong box-trail layout, which affords a low silhouette, good stability and all-around, on-carriage traverse.



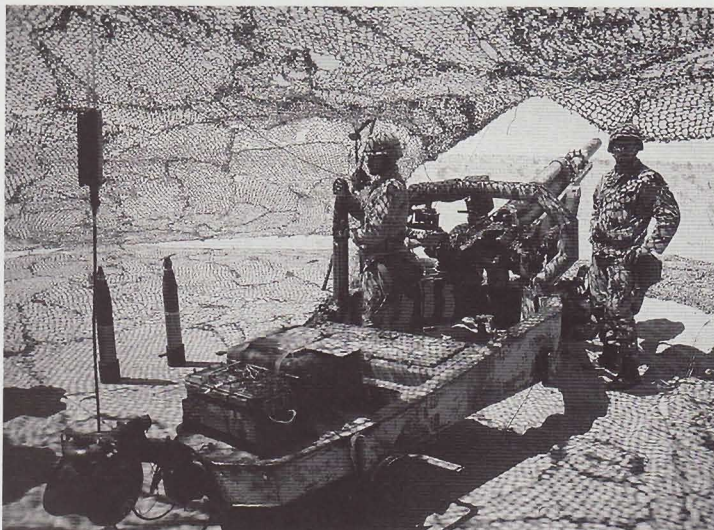




The fluid nature of desert warfare requires continuous field artillery support at all levels.



The threat of hostile armor attack emphasizes the importance of emplacing pieces to provide rapid direct antitank fire, if needed.







Forty M-51 Sheridan Armored Reconnaissance Airborne Assault Vehicles were the first armored vehicles deployed to Saudi Arabia during Operation Desert Shield.



Radio is the major means of communication in the desert because of the few terrain obstructions; also, the speed, mobility, and dispersion in desert operations would require more wire than it would be possible to lay. (U.S. Army photo)



Camouflage is especially important in the desert where natural concealment is lacking. Greater emphasis is placed on artificial means. All positioned vehicles and weapons are equipped with camouflage nets. (U.S. Army photo)





First placed into U.S. Army use back in 1966, the Sheridan was designed to replace the M-41 light tank and the M-56 self-propelled antitank guns at that time in service with the U.S. Army. The Sheridan is armed with an unconventional gun/missile launcher which can fire the Shillelagh missile or conventional type ammunition with a combustible cartridge. The hull of the Sheridan is made out of aluminum, while the turret is made out of welded steel with the loader on the left and the commander and gunner on the right. A 7.62 M-73 machine gun is mounted to the right of the main armament and there is a .50 caliber M2 machine gun on the commander's cupola.



Pictured on the front of the tank is the Ford-built Shillelagh guided antitank missile.



The Sheridan first saw combat service during the Vietnam War and still later in Panama during Operation Urgent Fury.





About 1,700 Sheridan were produced between 1966 and 1970 for the U.S. Army. Unfortunately, the vehicle proved a failure in service use with the Army. In 1979, the vehicle was withdrawn from service use in the Army, except for 54 vehicles belonging to the tank battalion of the 82nd Airborne Division. (U.S. Army photo)







▲ When deployed with the 82nd Airborne Division, the vehicle can be air-dropped, if needed, at low level. The vehicle's crew is parachuted in separately. During Operation Just Cause in Panama, a small number of M-551s were air-dropped by Air Force C-130 transport planes. (U.S. Army photo)

► This tankier is boarding his vehicle by the vehicle commander's purpose-designed crow's nest made up of steel armor plate that protects the vehicle commander when using his turret-mounted machine gun. (U.S. Army photo)



Two M-551 Sheridans of the 82nd Airborne Division race across the Saudi Arabian desert. (U.S. Army photo)





▲ The LAV is a lightweight, eight-wheel drive, amphibious armored fighting vehicle. It can reach speeds as high as 60 mph and can be airlifted by Air Force C-5, C-130 and C-141 aircraft.

◀ After being supported by U.S. Marine Corps Light Armored Vehicles (LAV) during Operation Just Cause in Panama, the U.S. Army requested the loan of 15 LAV-25s and a recovery vehicle for the reconnaissance role as part of the 82nd Airborne Armored Regiment. These vehicles were also quickly sent to Saudi Arabia as part of the 82nd Airborne Division deployment.



With the arrival of the 105mm gun-armed M-1 tanks of the 24th Infantry (Mech.), the 40 Sheridan tanks of the 82nd Airborne Division went into reserve duty. Pictured is a Sheridan on the desert sand of Saudi Arabia as the sun sets.







▲ The Iraqi military has in its inventory of weapon systems a number of chemical weapons which they have used with deadly effect on the army of Iran during their eight year conflict. Pictured is a U.S. Army truck-mounted decontamination unit in Saudi Arabia during a practice drill.

► To protect themselves from chemical agents, U.S. Army soldiers have been forced to practice wearing their mission-oriented protective posture (MOPP for short) gear. Unfortunately, this protective equipment seriously degrades physical performance due to its many layers of nylon-cotton fabric and inner layer of charcoal-impregnated polyurethane foam.

▼ Extreme day and night temperatures on the desert cause extremes in the stability of the air. The strong inversion (highly stable) conditions that exist at night are ideal for the use of chemical agents. Pictured is a U.S. Army soldier drinking water through a small hole located in his protective face mask.







If chemical weapons are used by the Iraqi military forces, U.S. Army units are prepared to conduct decontamination drills. Pictured are U.S. Army soldiers wearing their MOPP gear, while washing down helicopters.







▲ Pictured are the first few Thyssen Henschel-General Dynamics Land Systems Division "Fox" Nuclear, Biological, and Chemical (NBC for short) Reconnaissance System (NBCRS) vehicles. Based on a German-designed 6×6 wheeled armored vehicle, the "Fox" was quickly deployed to Saudi Arabia.

▼ Since the "Fox" is a very new vehicle in service with the U.S. Army, only a small handful have been placed in operation by the U.S. Army. As a result of Operation Desert Shield and faced with the prospect of Iraqi use of chemical weapons, the German government donated 60 of the wheeled reconnaissance vehicles to U.S. military forces in Saudi Arabia. Fifty are going to U.S. Army units, and ten to the U.S. Air Force.



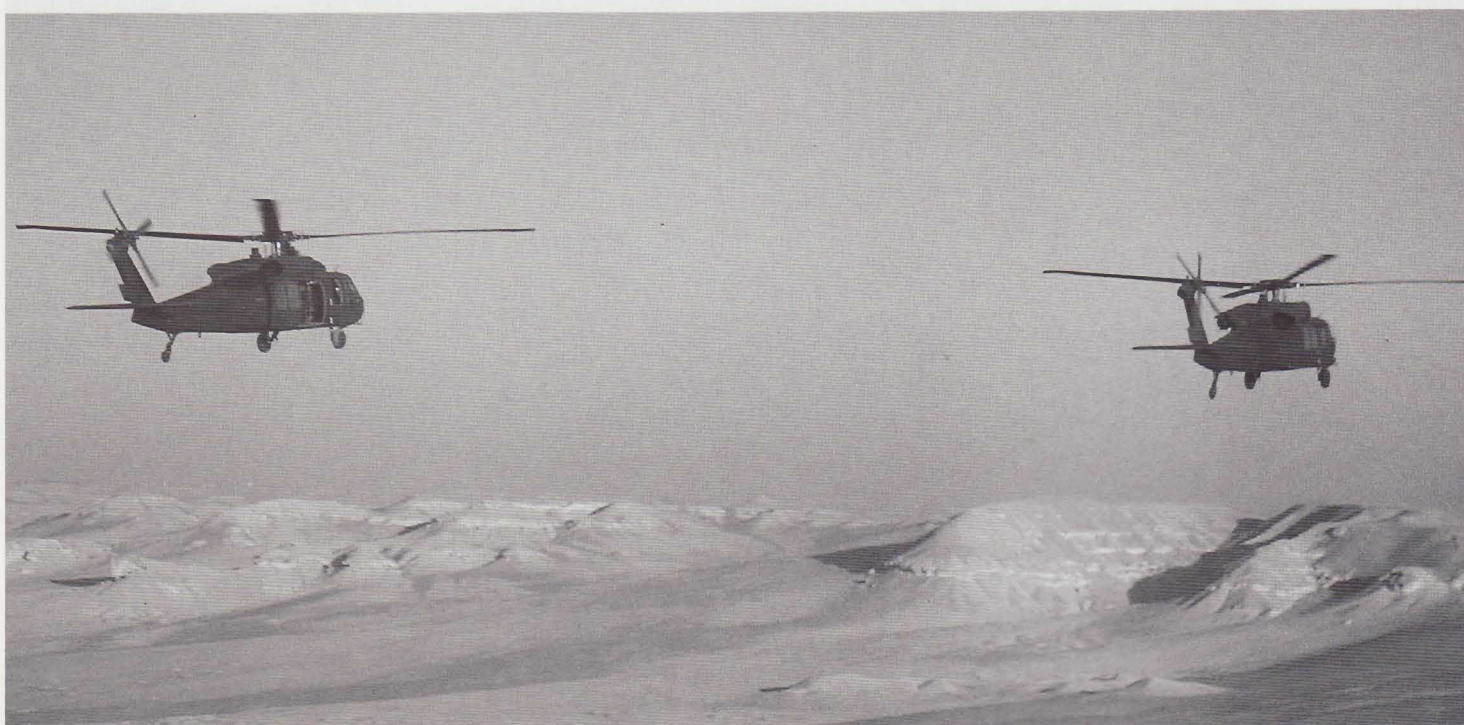




▲ While conducting airmobile operations in the desert, U.S. Army helicopters have a wide availability of landing sites, but the effectiveness of contour flying is greatly reduced.

◀ The lack of terrain features and vegetation increases the problem of assembling the necessary aircraft without their being detected. Loading sites are located well to the rear and are widely dispersed.

▼ The desert environment increases the vulnerability of helicopters in flight. The lack of terrain features exposes even low-flying helicopters to long-range visual observation and detection by electronic devices. This vulnerability may be reduced by advantageous use of the spaciousness of the desert and by increased night operations.

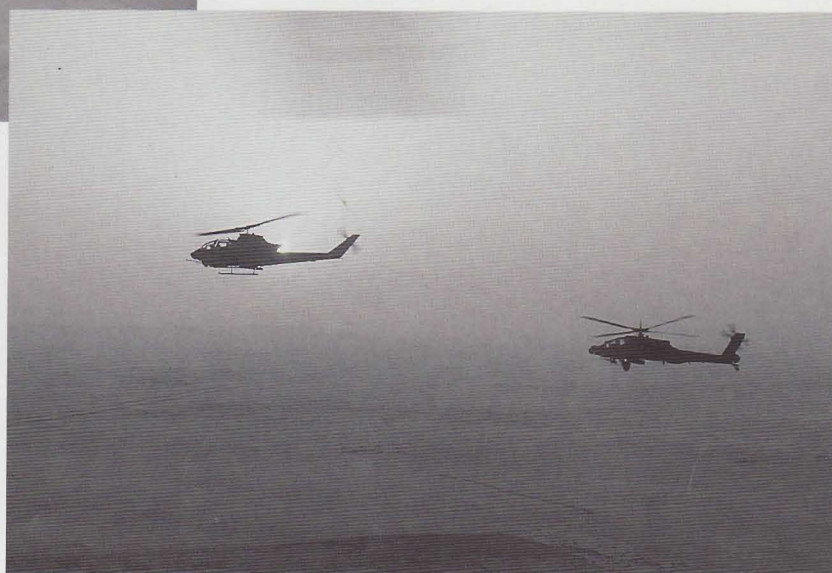






▲ In the desert, helicopter flight routes are carefully selected to avoid enemy strength and provide deception. Multiple routes complicate movement control and fire support, but they may be necessary to reduce vulnerability.

◀ Airlifted helicopter forces must be protected by both observation and armed attached helicopter gunships. Pictured are two U.S. Army OH-58D Scout helicopters flying over the barren landscape of Saudi Arabia.



While the AH-64 Apache Attack Helicopter is quickly replacing the AH-1 Cobra Attack Helicopter, which dates from the Vietnam War era, many Cobra helicopters still remain in U.S. Army service with Reserve and National Guard units. Pictured are both an Apache and Cobra gunship flying in formation together over Saudi Arabia.

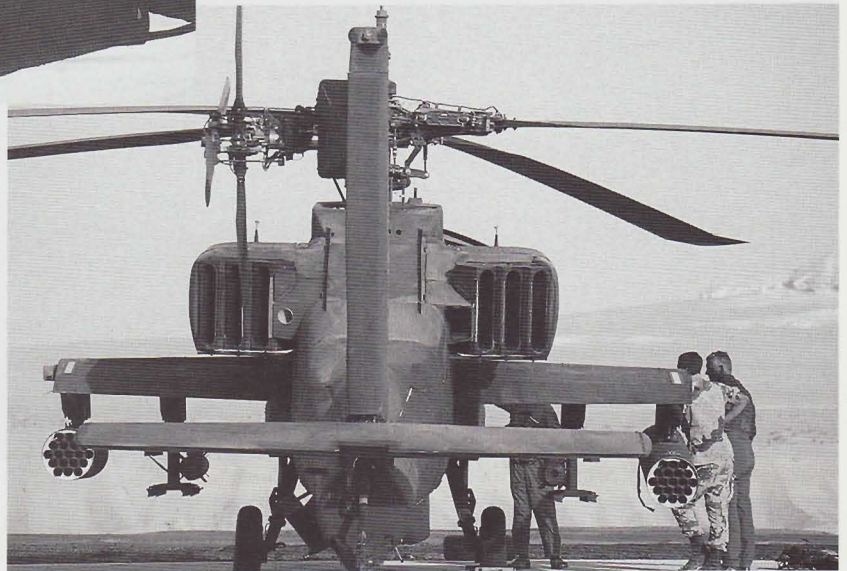




Operated by a crew of two seated in tandem, the AH-64A is capable of destroying moving armored columns and point and area targets on the modern battlefield. (U.S. Army photo)

► The Apache is powered by two General Electric T700-GE-701 turbine engines. The main rotor system is fully articulated with four main rotor blades and the tail rotor has four blades.

▼ The target acquisition designation sight (TADS) and the pilot's night-vision sensor (PNVS) are the keys to the aircraft's all-weather capability. (U.S. Army photo)







The next major Army force to reach Saudi Arabia after the 82nd Airborne Division was the 101st Airborne Division (Air Assault) based at Fort Campbell, Kentucky. While the 101st retains the title Airborne and has many paratroopers in its ranks, the title is merely honorary, based on its service during WWII.





The Black Hawk is twin engine helicopter that is used as the Army's first true squad assault helicopter, capable of carrying a crew of three and a combat-equipped 11-man infantry squad. It performs the mission of transporting troops and equipment into combat. These 101st Division Black Hawks have been just recently unloaded from a ship and are now prepared to leave the Saudi seaport of Damman.



The Black Hawk can also transport a 105mm howitzer with its crew and ammunition and has the range, endurance and maneuverability to make it a highly effective tactical assault vehicle. Pictured are a number of 101st Division Black Hawk helicopters leaving the Saudi seaport of Damman for their front-line position.





Pictured is a CH-47D Chinook Medium-Lift Transport Helicopter of the 101st Division, having been just unloaded from the cargo ship that brought it to Saudi Arabia. (U.S. Army photo)



The CH-47D is a medium-lift transport helicopter designed to improve force mobility. It is used primarily to transport personnel, weapons, ammunition, equipment and other cargo in general support of combat units. (U.S. Army photo)

Most operations for the Chinook consist of transporting logistic supplies as external loads. Emphasis is also placed on rapid internal cargo handling with standard pallets now used by the Army. Payloads up to approximately 24,000 pounds can be carried, depending on individual mission profiles and ambient conditions.



For helicopters in the desert, the majority of problems are caused by sand and dust. Helicopters create great clouds of dust and sand when taking off and landing. Sand and dust damage propellers and rotors and are sucked into engines where they act as abrasives on engine parts.



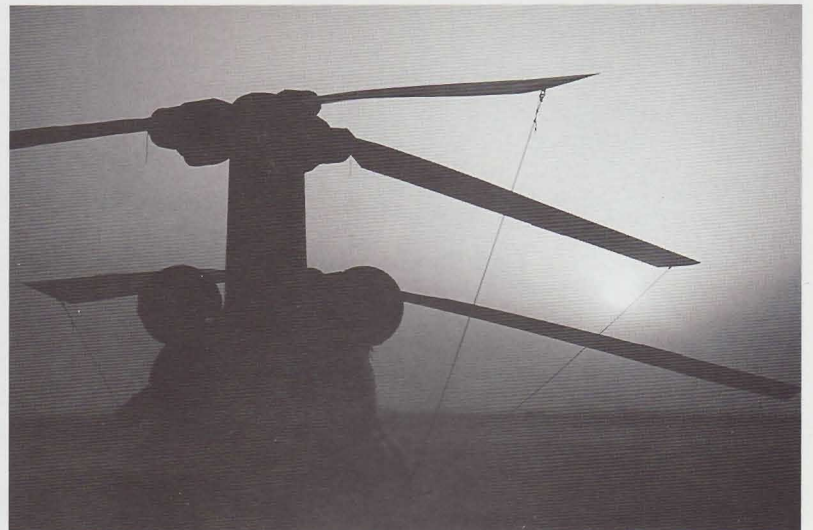
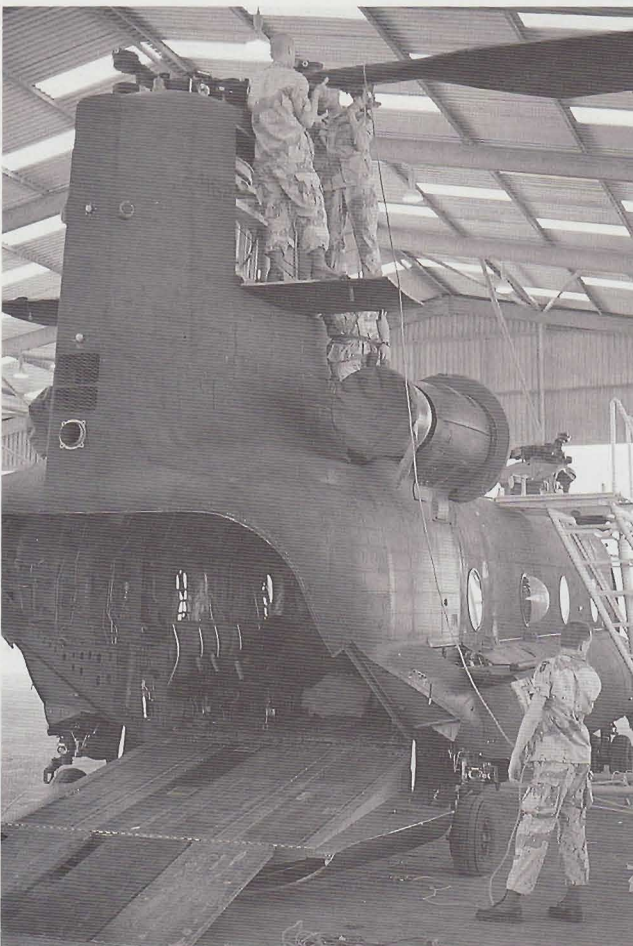




▲ Transport materials such as plastic windows are pitted by blowing sand with a resulting reduction of visibility. Sand adheres to lubricated parts causing excessive wear. Pictured are troops from the 101st Division taking a break from the Saudi heat inside a large shed.

◀ When shipped by sea, the Chinook helicopter is partially disassembled to save space on its transport ship. Once in Saudi Arabia, the Chinooks of the 101st Division had to be reassembled as being pictured.

▼ Scant vegetation and lack of terrain features increase the problem of concealment. Helicopters in the desert need to be widely dispersed and well-camouflaged. Helicopters, when parked, should be moored in wheel holes to reduce the angle of attack of the wings during sudden and violent winds prevalent in a desert environment.







The 101st Division gained much of its fame as a unit during the invasion of Europe on June 6, 1944 (D-Day), when paratroopers of the 101st and 82nd Divisions spearheaded the assault on Europe by the Allied Armies by dropping behind German Army lines.

Deactivated after WWII, the Division was reactivated in 1956. In July 1965, the 1st Brigade of the 101st Division was sent to South Vietnam where it saw heavy action. With a growing interest in helicopter warfare because of its widespread use during the Vietnam War, in 1974, the unit was formally designated an Air Assault Division. Pictured are soldiers of the 101st undergoing a briefing before moving out into the field.



One deployed into the field, the soldiers of the 101st Division, nicknamed the "Screaming Eagles", quickly began training in desert warfare. Pictured is a soldier of the 101st Division passing a small Saudi desert village.



The 101st Airborne Division (Air Assault) consists of three brigades, each with a headquarters units and three air assault infantry battalions. Also part of the unit are an aviation group of assault helicopters, artillery units, and a wide range of support units. Pictured is a soldier of the 101st making shooting plans for an upcoming training exercise.





▲ The 101st has its own signals, engineering and intelligence units, plus medical and maintenance support units. As a result, the division can operate as a completely independent entity almost anywhere it's needed by the Army. Pictured are soldiers of the 101st Division digging foxholes in the Saudi desert.

◀ The expanse of flat desert areas provides increased observation, excellent fields of fire, and freedom of maneuver which means any defensive position must be built in great depth and be capable of all-round defense, if needed. Pictured are soldiers of the 101st Division trying to dig a defensive position in the Saudi sand.



Pictured are a sniper team from the 101st Airborne Division practicing their craft in the Saudi night. The sniper is armed with an M-24 7.62mm rifle. The M-24 rifle is a six-shot, bolt-action repeating rifle which can be fitted with a day optical telescopic sight. The sniper's spotter is using a passive night sight device.







▲ On the first few days of September 1990, the first real armor might of the U.S. Army docked at Damman Harbour, a seaport in Saudi Arabia. To supplement the paratroopers of the 82nd and the helicopter assault infantry of the 101st, the tanks and infantry fighting vehicles of the 24th Infantry Division (Mechanized) arrived by sea.

► Pictured is a 6×6 Army truck being unloaded from a civilian ship in Saudi Arabia.

▼ The 24th Infantry Division (Mechanized) based at Fort Stewart, Georgia, is the most powerful ground element of the XVIII Airborne Corps. Pictured is an M88ARV coming off a U.S. Naval Sealift ship.



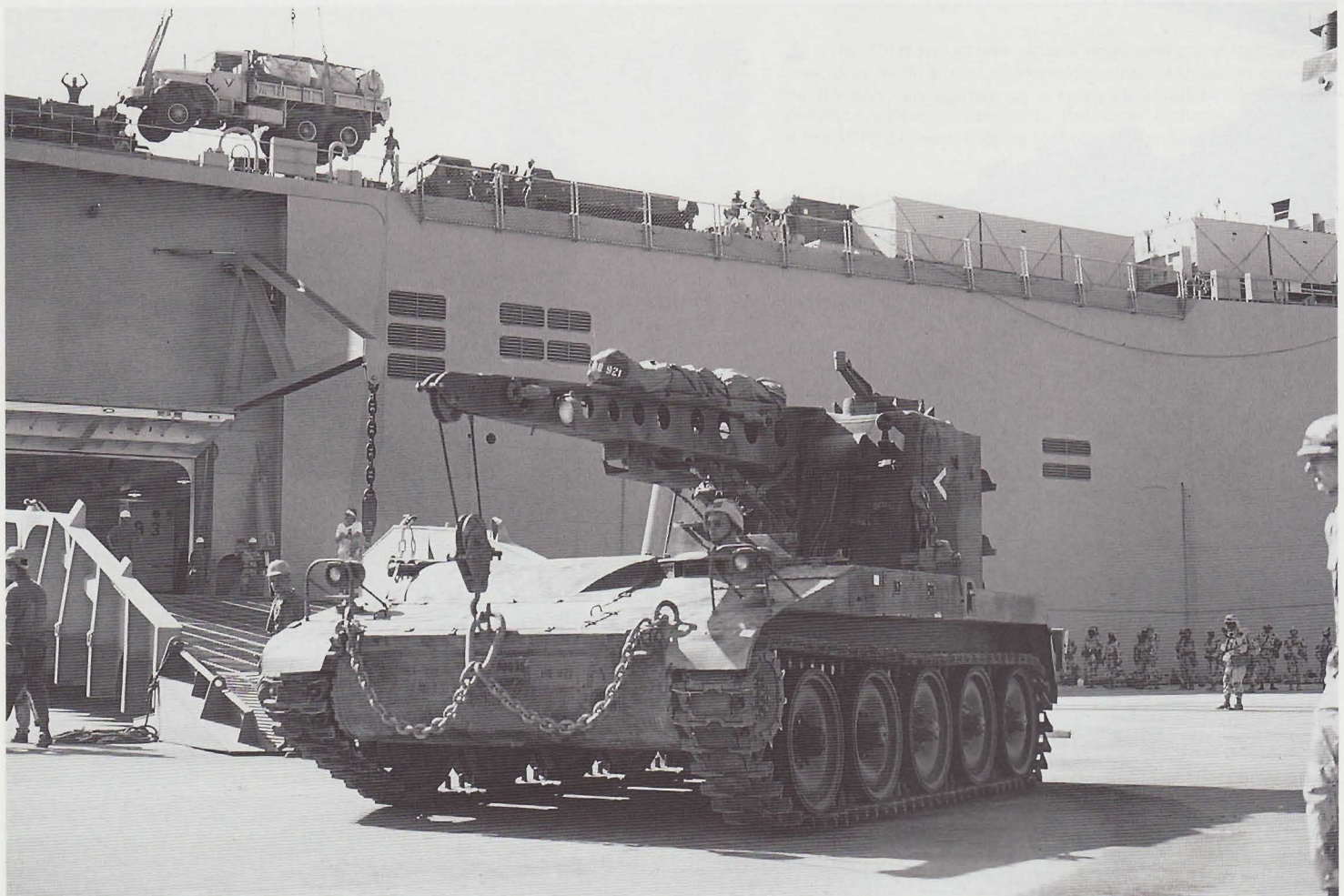




Soldiers from the 24th Division having just left the large U.S. Navy ship that brought them to Saudi Arabia are resting on the dock before moving out into the field.



A M-578 light armored recovery vehicle of the 24th Division leaving the large naval ship that brought it to Saudi Arabia.





An M-60 bridge launcher vehicle is pictured driving off the large ramp of the naval ship that brought it to Saudi Arabia.



6x6 Army truck coming ashore in Saudi Arabia.



An M-2 Bradley Infantry Fighting Vehicle being unloaded from a civilian merchant ship in Damman Harbour, Saudi Arabia.







An Army heavy supply truck (HEMTT) of the 24th Division being unloaded by cranes and slings from a civilian merchant ship in Saudi Arabia. (U.S. Army photo)



On the dock at Damman Harbour in Saudi Arabia is a line-up of Apache gunships still wrapped in the plastic wrap that protects them during sea transit.



▼ Protecting the numerous large ships unloading the 24th Division at Damman Harbour in Saudi Arabia were a fleet of small U.S. Coast Guard speed boats equipped with machine guns.







The most important vehicles brought into Saudi Arabia by sealoift were the 105mm gun armed M-1 tanks of the 24th Division, General Schwarzkopf, commander of U.S. forces in Saudi Arabia was looking for a way to offset the large numerical advantages in tanks that the Iraqi Army enjoyed.



The 24th Infantry Division M-1 tanks stand ready for transportation to the interior of Saudi Arabia.

(U.S. Army photo)





Soldiers of the 24th Infantry Division perform operational checks on their 7.62mm machine gun which is located on the loader hatch of the M-1 tank.



An M-1 tank about to drive up the loading ramp of a flatbed tractor trailer. Notice the crew's duffel bags in the vehicle's stowage rack. (U.S. Army photo)





Trained to jump from planes into enemy territory, the men of the 82nd Airborne Division must have felt like they were being let down by being forced to board buses and trucks to travel in harm's way.

▼ Red beret paratroopers of the XVIII Airborne Corps boarding civilian Saudi buses with their small arms.







▲ In their desert camouflage battle dress uniforms, soldiers of the XVIII Airborne Corps are waiting for orders after unloading from their transport planes.



These paratroopers of the 82nd Airborne Division on their second day in Saudi Arabia are taking time to clean their weapons.

The soldiers of the 82nd Airborne Division quickly deployed into the deserts of Saudi Arabia to act as blocking force against any possible Iraqi attack on Saudi Arabia. Pictured are paratroopers of the 82nd Airborne Division loading down a Hummer.







Desert training is necessary to prepare individuals and units to live and fight effectively in desert environments.

The initial objective of desert training is to prepare the individual mentally and physically for the desert environment. Units should be sufficiently acclimated to the desert before being committed to combat.

In desert training, emphasis is placed on techniques and tactics peculiar to the desert area; the importance of small unit actions; decentralized operations accentuating initiative, boldness and determination on the part of the commanders; self-reliance on the part of the individual soldiers; teamwork and control.

Pictured are paratroopers of the 82nd Airborne Division training in the deserts of Saudi Arabia.







A lone paratrooper of the 82nd Airborne Division stands guard in the Saudi desert. In the background are M-551 Sheridans of the same division.



Soldiers from the 82nd Airborne Division with a HMMWV returning from a patrol in Saudi Arabia.

(U.S. Army photo)





▲ The TOW and the soldier at sunset in Saudi Arabia. (U.S. Army photo)

► In open terrain, artillery and its supporting vehicles are widely dispersed and well camouflaged. (U.S. Army photo)

▼ Pictured is an M-102 105mm towed howitzer of the 82nd Airborne Division in a camouflage position.







The improvised external stowage racks on the rear of this Sheridan are a reminder of the vehicle's very cramped interior. (U.S. Army photo)



Forty M-551 Sheridans were the first armored vehicles deployed to Saudi Arabia. Pictured is a M-551 on patrol in the desert.



Over the years, various product improvements by the tankers of the 82nd Airborne





The primary weapon of the basic version of the LAV used by the 82nd Airborne Division in Saudi Arabia is the McDonnell Douglas 25mm M-242 Chain Gun Automatic Cannon (designated the Bushmaster) which is mounted in an armored two-man turret.



Division have made the Sheridan a rugged and reliable vehicle.



Chemical weapon agents may be delivered in varied forms: gas, liquid or aerosol. They can be delivered by mines, artillery, rockets, bombs, or aircraft spray. Chemical agent clouds can cover large areas and drift into foxholes, hatches, and bunkers to cause casualties.



A military policewoman on duty with her M-60 machine gun at Damman Harbour in Saudi Arabia.





The AH-64A Apache Attack Helicopter is the Army's twin engine, adverse weather, day/night antitank helicopter.



Because of their versatility, the U.S. Army has made wide use of helicopters since the Vietnam War. Pictured is a U.S. Army UH-60 Blackhawk troop transport helicopter hugging the desert floor of Saudi Arabia.



Today, the 101st is a helicopter-heavy light infantry force. Pictured are the first Blackhawk helicopters of the 101st delivered to Saudi Arabia by sea. (U.S. Army photo)



The Apache in combat is armed with the Hellfire laser-guided antitank missile.





Engine life for helicopters like the Chinook in the desert is much shorter. But an effective preventative maintenance program will indicate needed repairs before complete engine loss results.



...tem, 2.75-inch rocket pods, and a 30mm cannon.

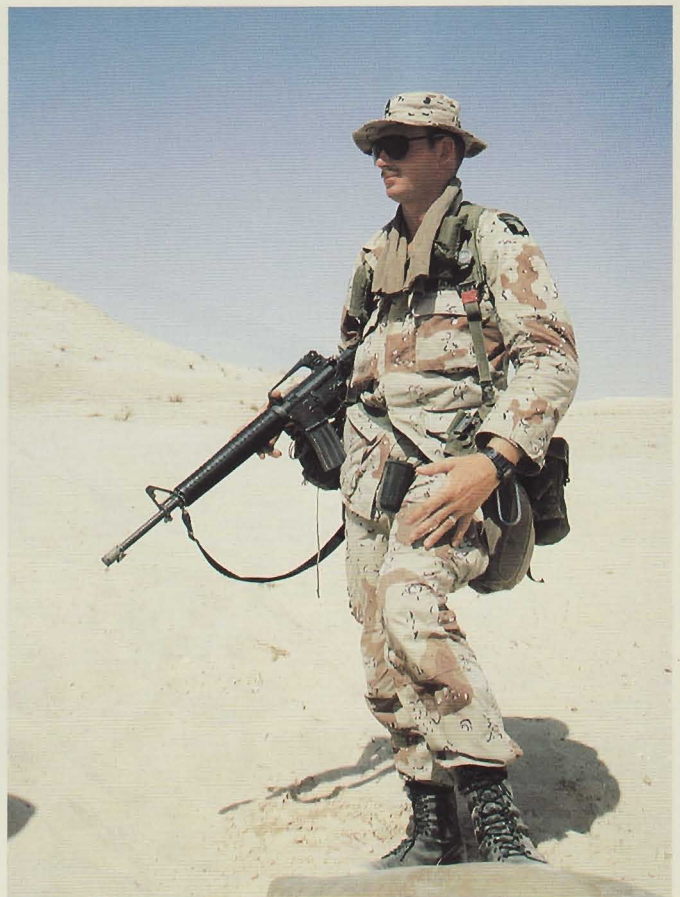


Protecting the numerous large ships unloading the 24th Division at Damman Harbour in Saudi Arabia were a fleet of small U.S. Coast Guard speed boats equipped with machine guns.





Pictured in the foreground of this dock in Saudi Arabia is an Army "Avenger" anti-aircraft missile system. Based on a HMMWV (high-mobility, multipurpose, wheeled vehicle), a pedestal-mounted Stinger missile system has been fitted. The fire unit carries eight Stingers in two pods on a gyro-stabilized turret.



Pictured is a soldier of the 101st Airborne (Air Assault) Division during training in the Saudi desert.







The M-1 tank is powered by a Textron Lycoming AGT 1500 turbine engine, far more reliable, smaller, quieter and producing a lot less smoke than diesel tank engines. Pictured is an M-1 tank of the 24th Infantry Division under the hot desert sun.



Weighing in at over 60 tons, one wrong move by the driver of this M-1 tank could destroy the truck that he's trying to drive onto. (U.S. Army photo)

► These M-1 tanks of the 24th Division are the only vehicles that could pose a real threat to Iraqi's fleet of 750 T-72 main battle tanks. (U.S. Army photo)



◄ Soldiers from the 24th Division having just left the large U.S. Navy ship that brought them to Saudi Arabia are resting on the dock before moving out into the field.





With the 105mm gun equipped M-1 tanks of the 24th Infantry Division (Mechanized) there is stowage for 55 main gun rounds; 44 of these rounds are stowed behind sliding, blast-resistant doors in the turret bustle, and all but three of them in position protected against secondary blast effects.



Pictured are paratroopers of the 82nd Airborne Division training in the deserts of Saudi Arabia.



The Multiple-Launch Rocket System (MLRS) is a free-flight artillery rocket system that greatly improves the conventional indirect fire capability of the field Army.







Another important element of the 24th Infantry Division (Mechanized) is their fleet of M2/M3 Bradleys. The primary weapon of the Bradley is the McDonnell Douglas 25mm M-242 Chain Gun Automatic Cannon (designated the Bushmaster).



For antitank protection, all Bradley vehicles feature a dual tube armored BGM-71 TOW missile launcher on the left side of the turret. The TOW missile can defeat most armored vehicles at ranges of almost two miles.



The M-109 has a crew of six. Pictured are the crewmen of a 24th Division M-109 posing in front of their vehicle. The crew are all carrying their personal small arms needed for the security of the vehicle in the fluid nature of desert warfare.





Like the 24th Division, the 197th Brigade was equipped with early model M-1 tanks mounting a 105mm cannon. Pictured are crewmen of an M-1 tank checking the 7.62mm machine gun mounted on the loader position on top of the M-1 tank.



Pictured is a military policeman of the 24th Infantry Division guarding a bus convoy in Saudi Arabia.

Total concealment is rarely achieved in a desert environment, yet proper camouflage measures can reduce the effectiveness of enemy observation and, consequently, of enemy operations. Pictured is a camouflaged headquarters units of the 24th Division somewhere in Saudi Arabia.







This M-113A2 of the 197th Brigade, racing across an M-60 Bridge Launcher unit, is carrying extra rolls of barbed wire. For nighttime security reasons, the barbed wire is emplaced around the defensive positions of the Brigade.



For M-1 tank crews in the deserts of Saudi Arabia, tank gunnery poses acute problems under extreme heat conditions.





Pictured are M-1 tanks of the 1st Cavalry Division practicing small-unit tank tactics somewhere deep in the Saudi desert.



The eyes may be protected from the intense sunlight and wind-driven sand by tinted goggles; however, these will not completely protect tank drivers and others constantly exposed to the sun and wind from damage to their eyes.

A MLRS crewman takes a defensive position while the rocket launcher is reloaded.







Soldiers of the 24th Division load their M-1 tanks on flatbed trucks after their arrival in Saudi Arabia. (U.S. Army photo)



A crewman helps direct the driver of an M-1 tank up the rear ramps of a flatbed truck. (U.S. Army photo)

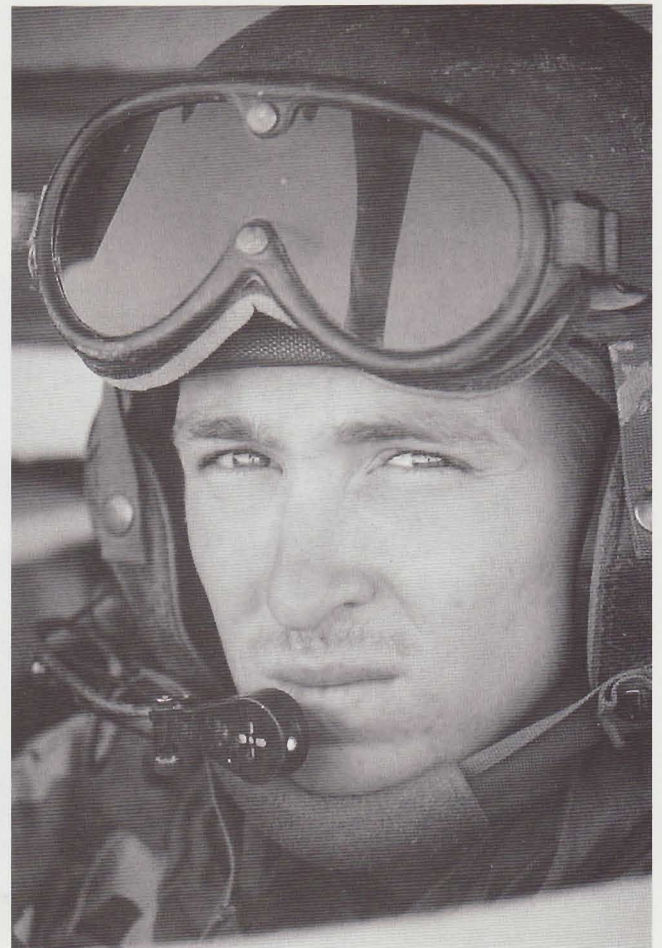




▲ M-1 Abrams tanks from the 24th Infantry Division (Mechanized) in the Saudi Arabian desert after a convoy from the port that they landed at. (U.S. Army photo)

► Occupation Tank Driver, a soldier from the 24th Infantry Division (Mechanized) in Saudi Arabia. (U.S. Army photo)

▼ Soldiers of the 24th Infantry Division discuss the strategy for transporting their M-109 self-propelled howitzer to the interior of Saudi Arabia. (U.S. Army photo)







Radio operator from the 24th Infantry Division in the back of his HMMWV. (U.S. Army photo)

Soldiers from the 24th Infantry Division relaxing in their tent in Saudi Arabia. (U.S. Army photo)



The most powerful and deadly component of the 24th Infantry Division (Mechanized) is its fleet of early model M-1 tanks, armed with a 105mm gun.





Designed to replace the M-60 tank in U.S. Army service, the first production M-1 tank entered U.S. Army service in early 1980. It was also given the name "Abrams" in honor of General Creighton Abrams.



M-1 tanks at speed in the Saudi desert. The M-1 tank has a top speed of 45 mph on level ground.



The M-1 tank is equipped with both conventional steel armor plate, and composite special armor which consists of layers of both steel and non-steel armor.







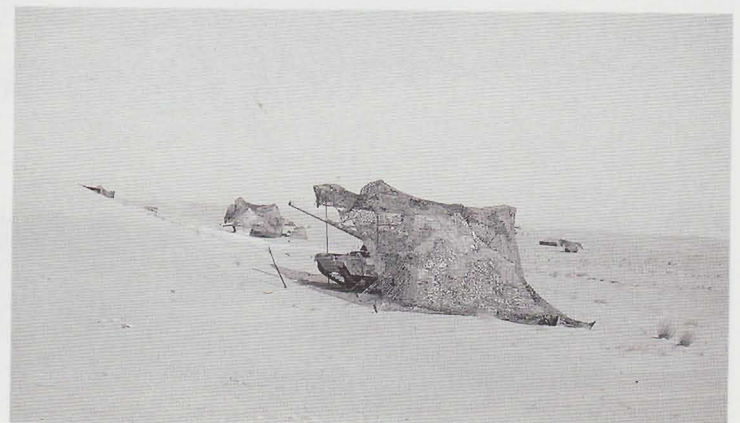
Fitted to the tank commander's position is an M2HB .50 caliber machine gun.



These advanced features allow the M-1's gun to be fired with great accuracy to the limit of its effective range, day or night, with a very accurate fire on-the-move capability. Pictured is a loader of an M-1 tank, looking at a map, trying to figure out where he is.



Additional advanced features fitted to the M-1 are a full-solution fire control system featuring a laser range finder, ballistic computer, gunner's thermal-imaging day/night sight full turret stabilization, a muzzle reference system to measure gun-tube distortion, and a wind sensor.



An M-1 tank of the 24th Division hides under a camouflage net during the hot noon day sun.





▲ The M-2 Infantry Fighting Vehicle (IFV) carries a commander, gunner and driver plus six infantrymen for a total vehicle crew of nine. Pictured is an M-2 Bradley of the 24th Division coming to a fast stop and allowing its onboard infantry to dismount using the rear ramp door.

► The Bradley is equipped with a front mounted Cummins 500 horsepower VTA-903 T turbo-charged diesel engine which gives it a top speed of 40 mph.



The Bradleys of the 24th Infantry Division (Mechanized) are from an earlier production run. They do not feature the extra steel armor and bigger engines of the newer Bradley M2A2/M3A2 which were just recently fielded in Western Europe.





While the M-1 tanks and Bradleys of the 24th Division possess a great deal of firepower and mobility, it's still the infantrymen who have to go in those final yards to route the enemy out of his foxholes and bunkers. Pictured are a group of infantrymen of the 24th Division getting ready for another round of training.



For artillery support, the 24th Division is equipped with the M109-series 155mm self-propelled Howitzer.





The M-109 family of vehicles was designed to provide a medium-weight, self-propelled carriage for a 155mm howitzer with adequate mobility to support armor and mechanized infantry units.



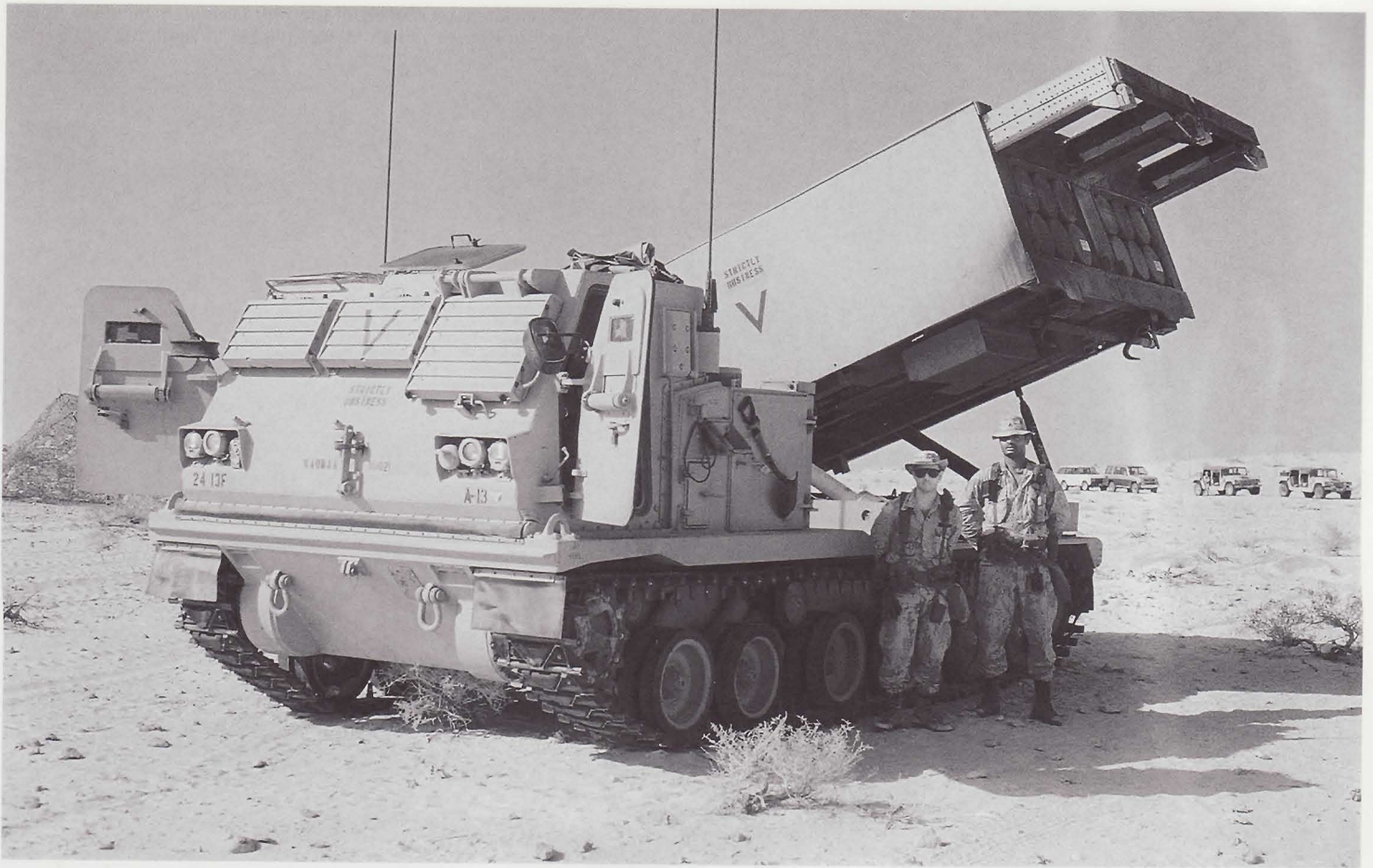
◀ The M-109 is an aluminum-armored, self-propelled, air-transportable field artillery weapon system. It is powered by a 405-horsepower engine and mounts an enclosed turret with a variable recoil mechanism and 155mm cannon.

◀▼ All fielded Army weapons are M-109A2s or M-109A3s. They are physically similar and operationally identical. The primary armament is the M-185 cannon. The secondary armament is a flexible .50 caliber machine gun mounted in a turret hatch.

▼ Maximum ranges of the projectiles are 18,000 meters. With rocket-assisted projectiles, the maximum range goes up to 23,500 meters. The maximum rate of fire is four rounds per minute for three minutes. The sustained rates of fire vary with the type of projectile and charges used. Pictured is a line-up of various types of projectiles used in the M-109.







The Multiple-Launch Rocket System (MLRS) consists of a 12-round launcher mounted on a highly mobile, tracked vehicle and is capable of firing rockets one at a time or in rapid ripples to ranges of more than 30 kilometers.



The MLRS rocket launcher system is mounted on a Bradley-type chassis known as the M-987 Fighting Vehicle System (FVS) carrier. The FVS carrier armored cab seats three people. Armor protection is provided by the aluminum cab and ballistic front windows.





Pictured are soldiers of the 24th Division loading the "six-pack" of rockets into an MLRS launcher in Saudi Arabia.

The MLRS has a built-in derrick which allows rapid reloading of palletized rounds by a single soldier if need be.



Pictured in the desert of Saudi Arabia is an M-577 command vehicle of the 24th Infantry Division (Mechanized).







▲ In the desert, camouflage problems are encountered that require imagination, ingenuity, and intelligence. The lack of natural overhead cover, the increased range of vision, and the bright tones of the desert terrain place emphasis upon sitting, dispersion discipline, and the skillful employment of dummies and decoys to achieve deception or surprise. Pictured is a camouflaged forward location of U.S. Army troops in Saudi Arabia. (U.S. Army photo)

▲▶ A camouflage net normally relies on concealment by casting irregular shadows to break up the form of the concealed object it's trying to hide. In the desert, this is useless, since shadows cast against a bright desert sand background shows conspicuous contrasts. As a result, in the desert, a camouflage net must be a complete cover which relies on its imitation of the ground surface, both in color and texture, for its effect. (U.S. Army photo)

▶ This Hummer of the 24th Infantry Division sports a halloween mask on the front of the vehicle.



In the desert, cover from enemy direct fire may be afforded by dunes, hills and other irregularities of the desert terrain. Pictured are a platoon of M-1 tanks of the 24th Division in a defensive position near a large hill in Saudi Arabia





◀▲ Road and trails are scarce and usually connect villages and oases. Wheeled and tracked vehicles can travel generally in any direction over most of the desert and need not be confined to roads and trails.

▲ Maintaining direction and locating positions in the desert are extremely difficult because of the absence of roads, trails and well-defined landmarks. Personnel at all levels have to be thoroughly instructed in navigational methods and equipment before participating in desert operations. Pictured in the distance is a camouflaged battery of M-109 self-propelled artillery pieces.

◀ Studies indicate that while visibility is almost always good in the desert, it is often very deceptive. Objects frequently appear magnified, and a distant hill or sand dune may be twice as far away as it appears to be. The absence of trees and other vegetation in the desert prevents comparisons which aid in judging distances.



The sun, dust and sand, mirages, wind and moonlight, all of these affect visibility in the desert. In open terrain, sound, flash, laser, and radar-ranging are employed extensively to determine range. Pictured are two M-1 tanks of the 24th Division on patrol in the Saudi desert. (U.S. Army photo)





▲ Inherent to the success of any tactical operation is a sound logistical plan. It is especially important in the desert because the greater distances used in maneuver and deployment complicate supply procedures. Pictured is a 24th Division Heavy Expanded Mobility Tactical Truck (HEMTT) hauling fuel to its front lines.

► Mobility and freedom of tactical maneuver is tied to the logistical base; consequently, to extend mobility and freedom of action in desert operations, it is often necessary to establish additional bases. Pictured is a U.S. Army 6×6 cargo truck in Saudi Arabia.

▼ The environmental effects on supplies must also be considered. Frequent dust storms, occasional torrential rain, extreme changes in temperature, are examples of conditions which, unless anticipated, will restrict effective logistical support. Pictured are soldiers of the 24th Division securing a load of supplies for transport to the desert by a civilian Saudi truck.







A unit's tactical effectiveness in the desert depends to a large degree on the combat service support available. Equally, its vulnerability lies in its exposed lines of communications and the immobility of its bases of supply and support. Pictured is a supply base for the 24th Division in Saudi Arabia.



Security is a continuing problem in any supply operation. Combat service support installations and supply columns provide desirable targets and are susceptible to enemy attack. Pictured is a supply base of the 24th Division in Saudi Arabia.



Pictured is an Army heavy transport truck taking supplies to the front lines.





▲▲ Patriot is the Army's medium and high-altitude ground-to-air missile system that provides the primary air defense of the field Army and defends vital military bases.

▲ Patriot uses command guidance through mid course, with terminal guidance provided by a concept called "track-via-missile." As the missile nears its target, it informs the ground-based radar of its location in relation to the target. Ground-based computers then direct the missile on a path to ensure a kill. The supersonic missile employs a conventional warhead.

◀ The Patriot has also been improved to provide an anti-tactical ballistic missile capability. Pictured is a female soldier guarding Patriot firing unit in Saudi Arabia.

▼ The mobile (truck-mounted), all-weather Patriot features a high kill probability, fast reaction time and multiple target engagement capability. The system is designed to operate in an intense countermeasure environment.





To beef up the 24th Infantry Division (Mechanized) when it was being shipped to Saudi Arabia, the XVIII Airborne Corps attached to the 24th the 197th Infantry Brigade (Mechanized) based at Fort Benning, Georgia.



Looking much like a rush-hour traffic jam, as found in most American cities, the support transport vehicles of the 197th Brigade drive to their new home in the Saudi desert.







Unlike the desert scheme painted vehicles of the 24th Division, the tanks and wheeled vehicles of the 197th Brigade featured a NATO (European) based camouflaged scheme. Due to the haste in which they were shipped to Saudi Arabia, there was no time to repaint them.



Because the Iraqi Army began building large defensive positions in Kuwait, the 197th Brigade began practicing the methods needed to defeat and breach defensive works. Pictured in Saudi Arabia is an M-1 tank of the 197th Brigade racing towards a deployed M-60 bridge launching unit. In the background, an engineer M-113A2 vehicle is towing a mine-clearing trailer.





Much like the other Army units before them, the 197th Brigade quickly began around-the-clock training to prepare them for future conflict. Pictured is an M-1 tank of the 197th at speed in the Saudi desert.



Unlike the 24th Division, the 197th Brigade does not yet have the M-2 Bradley in service. Instead, it relies on the old dependable M-113A2 armored personnel carrier seen here racing across the Saudi desert.



► Coming across the desert at high speed is an M-901-series Improved TOW Vehicle (ITV) of the 197th Brigade.

▼ The M-901 (ITV) is an M-113A2 armored personnel carrier fitted with an elevating two-launcher TOW turret which allows the anti-tank missile to be fired from hull defilade with the gunner and his assistant under armor protection. The M-901 of the 197th has its TOW launcher unit in the stowed position for travel.







Beginning in October, units of the III Corps based at Fort Hood, Texas began to deploy to Saudi Arabia. The first of their units to arrive in Saudi Arabia was the famed 1st Cavalry Division. While their heavy equipment was being brought in by sea, the troops themselves were flown to Saudi Arabia by chartered civilian airlines.



The well known 1st Cavalry Division has been on continuous duty for more than 60 years, since its formation on September 17, 1921, at Fort Bliss, Texas.



Nicknamed the "First Team" by General Douglas MacArthur, the division has served overseas for the more than these decades and distinguished itself in World War II, Korea and Vietnam.





▲ The Boeing 747 jet of United Airlines that flew these 1st Cavalry Division soldiers to Saudi Arabia is probably the last real comfort these soldiers will have in a long time.

◀ The soldiers of the 1st Cavalry Division that just unloaded from the Hawaiian Airline jet are wondering if they should stay in the plane rather than face the hot Saudi sun.



The 1st Cavalry Division was the first unit in the Army to receive the M-1 tank in 1980 for field tests.





Being a firm believer in military "Pomp and Circumstance", the 1st Cavalry Division's band greets the arriving soldiers of the division in Saudi Arabia.



The bandmen themselves are trained combat soldiers and carry their rifles at all times.



Pictured is a bandsman of the 1st Cavalry bend playing a large drum bearing the unit's crest.





Even in the desert waste of the Saudi desert, the 1st Cavalry Division does everything with a lot of military flair. Pictured is a change-of-command parade that was held shortly after the division's arrival in Saudi Arabia.







The 1st Cavalry Division, like the 24th Infantry Division (Mechanized), is also equipped with 105mm gun-armed M-1 tanks.



◀ Another desert phenomenon, familiar to tank crews that have fought in the desert, is the shimmering heatwaves that can easily disrupt accurate sighting of ranges greater than 1,000 meters. In fact, the effect becomes even more intense when observation is made through sensitive optical equipment.

◀▼ Tank radios are extremely prone to malfunctions due to desert conditions. Heat causes great strain on solid-state electronics. Dust and high humidity can seriously affect sensitive interior parts that can't be cleaned or easily replaced.

▼ The greatest single hazard is fine desert dust, which gets into everything, human or machine. Dust raised by the movement of tracked or wheeled vehicles can be dangerous as vehicles can easily lose visual touch with each other. Identification of individual vehicles can also become problematic when large dust clouds are created by fleet of military vehicles crossing a desert area.







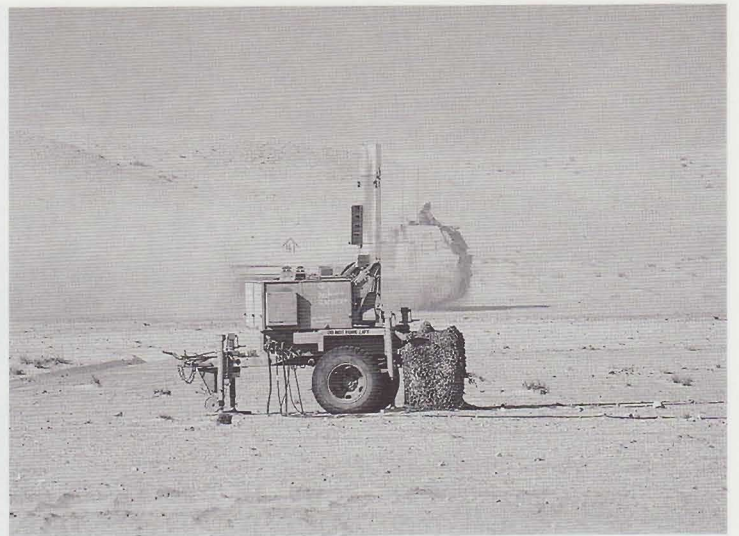
▲ Tank commanders prefer to work with their hatches up for better visibility. Unfortunately, under chemical attack, the American Army tank crews will be forced to keep all hatches closed, seriously degrading the effectiveness of their vehicles.

◀ Radio communications in the desert can become very erratic due to the humid air and frequent dust storms. At night, severe fading can affect AM communications with interference from long-range radio stations that can inadvertently jam short-range broadcasts.

▼ Loader's 7.62mm machine gun on the M-1 tank.







▲ The 1st Cavalry Division also has a unit of Multiple Launch Rocket System (MLRS). This weapon system provides a mobile long-range artillery rocket for the support of U.S. Army Ground Forces.

▼ MLRS Battery in firing positions somewhere in Saudi Arabia.

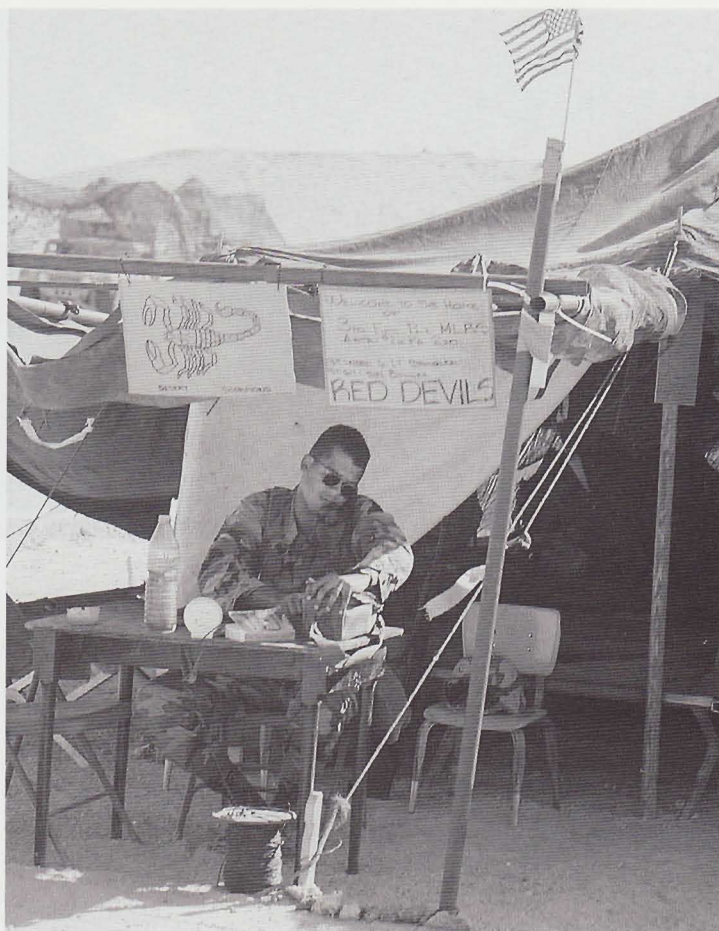
◀ After reloading the rocket launcher, the MLRS crew quickly returned to the cab of the vehicle for preparing the launch command.







MLRS rocket launcher unit raised to its firing position.

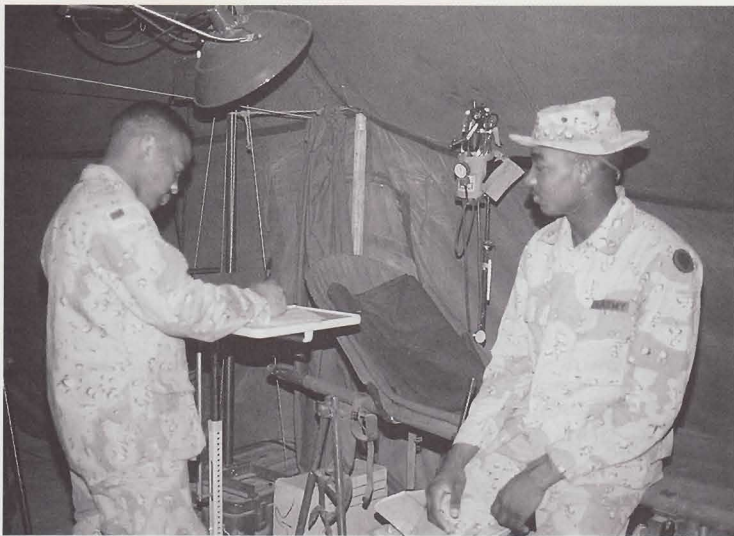


Unofficial headquarters of the 1st Cavalry Division's MLRS unit.



Crewmen of an MLRS unit of the 1st Cavalry Division take a break from their training.

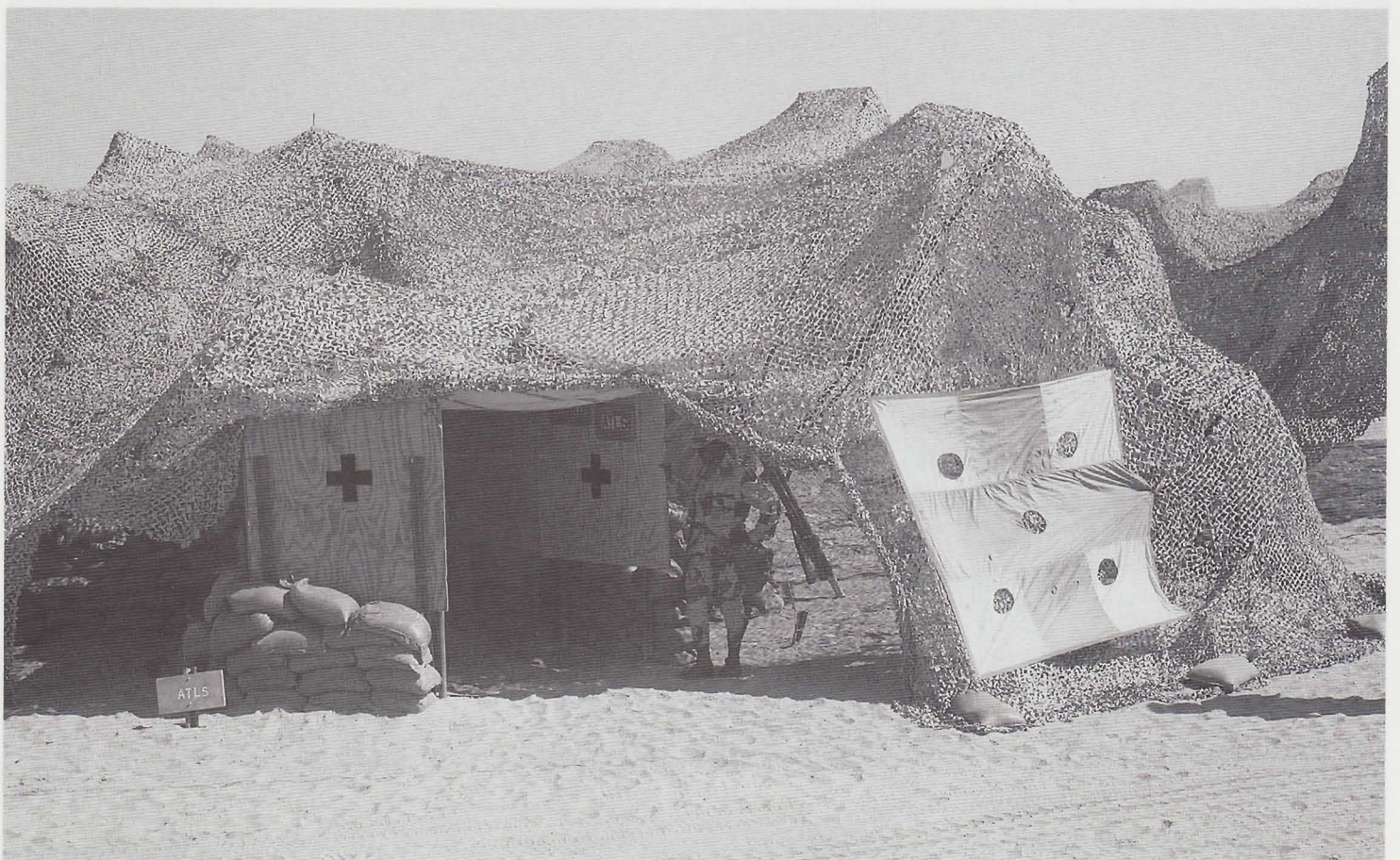




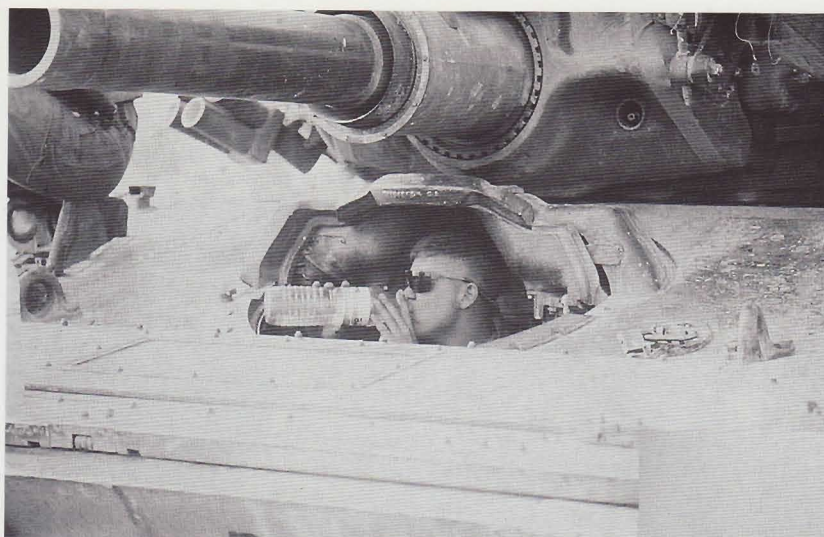
▲ Practically every disease of known military significance can be found in the desert among its human inhabitants, animals, and in locally available water and foods. As a result, preventative medicine and sanitation play a very important role in any U.S. Army desert operation.

► The driver of a 1st Cavalry Division Hummer, wears the unit's well-known patch on his shoulder.

▼ Disease in deserts may cause more than the usual amount of disability because of the added effects of dehydration. Pictured is a medical field unit of the 24th Division in Saudi Arabia.







A critical factor in desert operations is the inadequate water supply. Water sources are few and are usually inadequate for sizable military forces. Pictured is a tank driver of an M-551 Sheridan taking a deep swig of bottled water.

► The potable water requirements per soldier will vary in the desert according to the soldier's physical activity, type of food rations, and his environmental temperature.

▼ Any restriction of water below the amount needed for efficient cooling will result in a rapid loss of efficiency, reduction in work ability, and deterioration of morale. These soldiers from the 24th Division are taking a Pepsi break.







◀ Because of the scarcity of water in a desert environment, it is difficult to maintain clothing properly. Socks can be washed in water that has been used for bathing. When water is lacking, airing and sunning the clothing helps kill bacteria.

▼ The human body gains heat from a breeze or wind if the air is hotter than the body surfaces. The human body must lose heat constantly or its temperature will rise and the individual will die.



The human body is able to remain effective in the desert heat only so long as it is able to keep its temperature within normal limits. It does this by balancing heat gain with heat loss. The human body produces heat even when it is at rest, additional heat is produced during exercise. In the desert, the body also gains heat directly from the sun and from the sand and surrounding objects that have been heated by the sun.







► The human body can lose heat directly to the air and surrounding objects when these are colder than it is, as during the desert night.

▲ But, when the temperature of the air, the ground and surrounding objects is higher than that of the body, as during the desert days, the human body can lose heat by evaporation and it, in turn, cools the blood which has brought the heat of the body to the blood vessels in the skin.

▼ This evaporation of sweat makes it possible for man to exist in desert heat. Salt is lost with the sweat, and the sweat and salt that are lost by the body must be replaced by an equivalent amount of water and salt if the individual is to survive in the desert. (U.S. Army photo)







▲ Vehicle maintenance in the desert is a most important element. The degree of mobility of a unit in desert operations depends upon how well the extreme difficulties encountered in vehicle maintenance are overcome. (U.S. Army photo)

◀ The heat of a tank can be unbearable, both inside and on the outside of the tank. Pictured is a Sheridan tank commander of the 82nd Airborne Division. (U.S. Army photo)

▼ In Saudi Arabia or any desert environment, overheating is one of the major problems of operation in the desert. It can cause severe damage to a vehicle if not detected and guarded against.



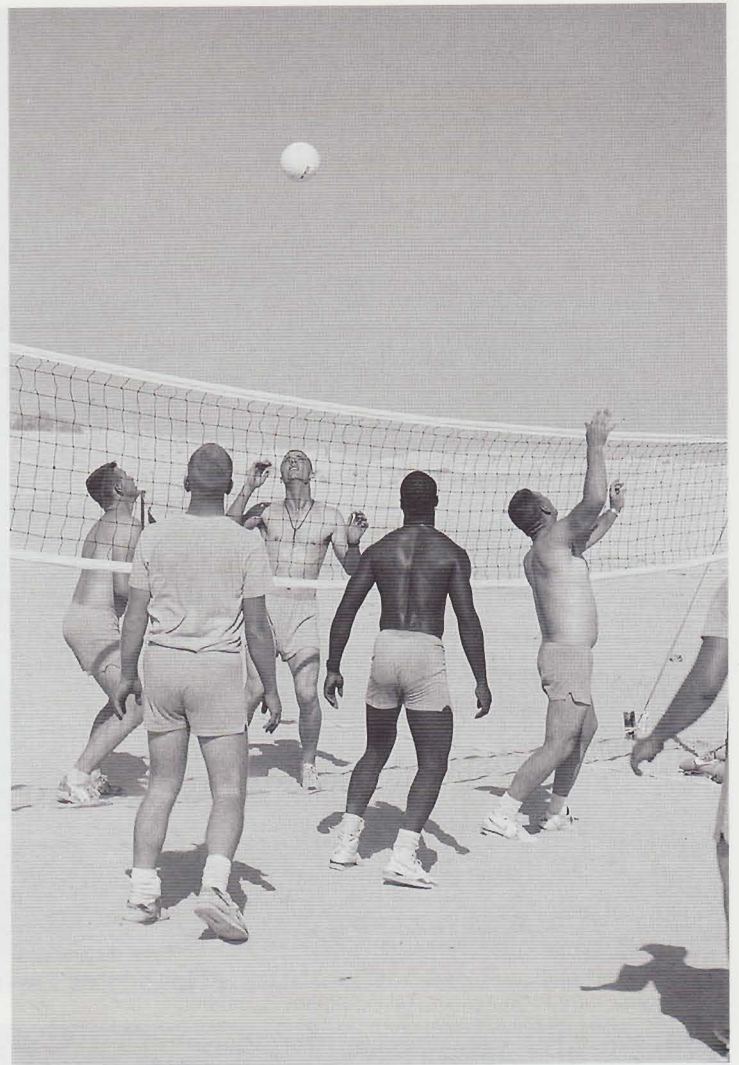




For Army soldiers in Saudi Arabia, the biggest problem has been boredom. If not training, there isn't much to do in Saudi Arabia. Writing letters is one possible cure for boredom. Taking photos is another.







Playing volleyball is also popular in Saudi Arabia. The Army soldiers even created their "Beach Club".

◀ Trying to call home for a warm message is always good for any soldier's morale!







1001 Israeli Armor Might



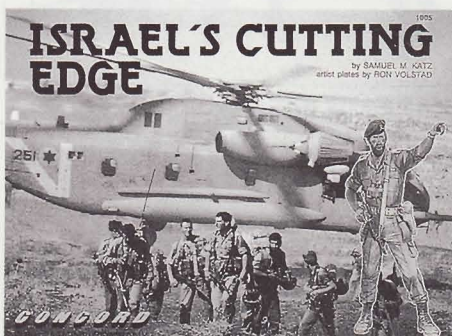
1002 Reforger: Return of Forces to Germany



1003 Battleground Lebanon



1004 T-72 Soviet Main Battle Tank



1005 Israel's Cutting Edge



1006 BMP Infantry Combat Vehicle



1007 Leopard 1 and 2



1008 U.S. Nuclear Submarines



1009 War in Afghanistan 1979-1989: The Soviet Empire at High Tide



1010 M2/M3 Bradley



1011 USMC Firepower



1013 Soviet Wheeled Armored Vehicles



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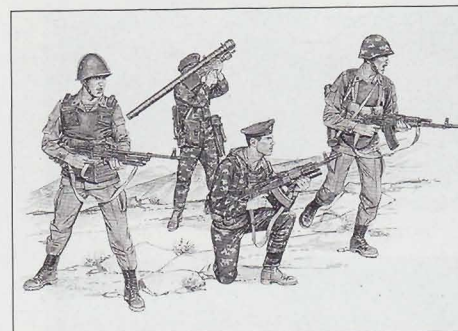
# *"Steps Ahead ... Always!"*



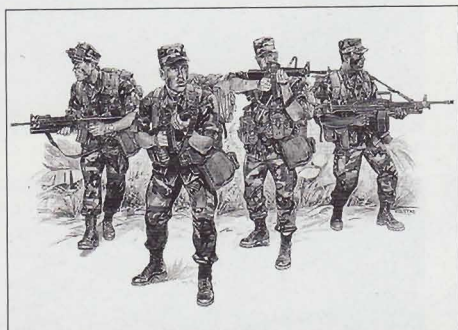
3001 Israeli Paratroopers



3002 Soviet Spatsnaz



3003 Soviet VDV Air Assault Force



3004 U.S. Rangers



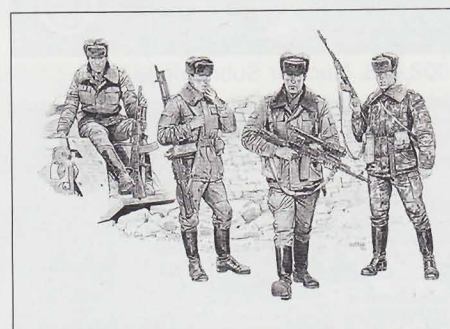
3005 Soviet Naval Infantry



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